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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,125	04/16/2004	Youichi Akasaka	2546	9861
28004	7590	06/24/2005	EXAMINER	
SPRINT 6391 SPRINT PARKWAY KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			SONG, SARAH U	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,125

Applicant(s)

AKASAKA, YOUICHI

Examiner

Sarah Song

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0404</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The prior art documents submitted by the applicant in the Information Disclosure Statement filed on April 16, 2004 have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

2. The drawings are objected to because of the borderlines and notations that are not related to the Figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers et al. (U.S. Patent Application Publication 2003/0181307).**

5. Regarding claims 1 and 5, Myers et al. discloses a communication system comprising: a span of Phosphate-doped optical fiber configured to transport optical signals. See Abstract. Myers et al. also discloses a continuous wavelength light system (Paragraph [0021]) coupled to the span of Phosphate-doped optical fiber and configured to pump continuous wavelength light (@ 1310 nm) onto the span of Phosphate-doped optical fiber.

6. Myers et al. does not expressly disclose that the total gain bandwidth to be at least 120 nm or about 200 nm. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the system to provide a gain bandwidth of at least 120 nm or of about 200 nm since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges involves only routine skill in the art. See MPEP 2144.05(II)(A).

7. Regarding claim 2, Myers et al. discloses the span of Phosphate-doped optical fiber to comprise a span of Phosphate-Germanium co-doped optical fiber. Paragraph [0015].

8. Regarding claim 3, Myers et al. does not expressly disclose 2 gain bands. However, optical amplifying fibers comprising multiple gain bands are well known in the art. Therefore, it

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would have been obvious to one having ordinary skill in the art at the time the invention was made to provide additional gain bands for the purpose of improving the gain characteristic of the communication system over the various communication windows.

9. Regarding claim 4, Myers et al. also does not disclose a wavelength gap, and an optical amplifier to amplify the wavelengths in the wavelength gap. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an additional amplifier for the purpose of enhancing the signals in the wavelength gap not covered by the gain bandwidth of the communication system.

10. Regarding claims 6-8, Myers et al. discloses the continuous wavelength light system to forward pump, backward pump, or simultaneous forward and backward pump. Paragraph [0023].

11. Regarding claim 9, Myers et al. does not expressly disclose a continuous Raman fiber laser. However, continuous Raman fiber lasers are well known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a continuous Raman fiber laser since Raman fiber lasers are known in the art to provide gain over the entire telecommunications window.

12. Regarding claims 10-13, Myers et al. does not expressly disclose that the system is configured for the various communication bands. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the system to provide a gain bandwidth of at least 120 nm in any combination of the communication bands since for the purpose of enhancing the communication signals in the desired respective bands.

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13. Regarding claims 14-26, the method limitations would have been obvious for the same reasons as setting forth requisite steps for operation of the device as discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sarah Song
Patent Examiner
Group Art Unit 2874